

資料探勘於影像資訊之應用-以乳房微鈣化特徵處理為案例

吳智誠、傅家啟、李三剛

E-mail: 9018609@mail.dyu.edu.tw

摘要

判讀乳房X光片中的微鈣化(MICROCALCIFICATIONS)徵象是診斷乳癌是否發生的早期重要指標之一。歐美國家已推廣女性應定期接受乳房X光攝影(X-RAY MAMMOGRAPHY)檢查以及早發現乳癌及降低死亡率。而現有的微鈣化檢測系統尚無整合影像強化處理及檢測模式之考量，其檢測分類模式也常流於一黑箱系統。整合微鈣化影像強化及特徵選擇不僅有助於觀察微鈣化影像，也能於檢測分類系統上提供一合理之佐證。本論文是一整合之研究報告，嘗試以資料探勘(DATA MINING)的方式去處理微鈣化檢測的問題。並且從記憶基礎理解(MEMORY-BASED REASONING, MBR)的模式來選擇特徵及分類。並測試影像強化及不同特徵萃取模式對微鈣化檢測的績效。

關鍵詞：資料探勘、特徵選擇、特徵萃取、記憶基礎理解、微鈣化、X光攝影檢查、乳房X光片

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